

## NETWORK TOPOLOGY MANAGER

### ABSTRACT OF THE INVENTION

- A network infrastructure, and methods for managing and configuring networks, are disclosed. The network infrastructure is physically wired once, and includes a plurality of interconnected switches and a plurality of devices coupled thereto, with each network interface on a device coupled to a single switch. Network traffic is forwarded between devices by programming intervening switches to enable a communication path between the devices.
- 5    Traffic intended for a particular device is forwarded by the intervening switches only to that device. Traffic is only forwarded between devices for which a communication path has been enabled. The network configuration, the function of a device in a network application, or the position of the device in the network topology, can be changed by programming the switches to
- 10    disable existing communication paths and/or enable new ones. Accordingly, networked resources are allocated as needed without changing the physical wiring of the network.
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